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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,896	07/15/2003	Gary J. Ballantyne	030174	8935

7590 06/17/2005

QUALCOMM Incorporated  
Attn: Patent Department  
5775 Morehouse Drive  
San Diego, CA 92121-1714

EXAMINER
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HAROON, ADEEL

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/620,896	BALLANTYNE, GARY J.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Adeel Haroon	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-17, 23-28, 52-57 and 64-68 is/are allowed.
- 6) ☒ Claim(s) 18, 29, 34, 38-40, 45, 49, 50, 58 and 63 is/are rejected.
- 7) ☒ Claim(s) 19-22, 30-33, 35-37, 41-44, 46-48, 51 and 59-62 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____   | 6) <input type="checkbox"/> Other: ____                                     |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolkstein (U.S. 5,287,543). Wolkstein discloses a first and second amplifier, element numbers 38-1 and 38-2, for transmission of a radio call in figure 1a (Column 2, lines 31-37). Wolkstein also discloses a radio frequency antenna, element 32V, for a wireless interface associated with a mobile wireless communication device (Column 1, lines 29-32). Wolkstein further discloses a coupler/combiner circuit, element number 30, to combine the first and second output branches for transmission over the antenna (Column 2, lines 46-51). Wolkstein does not expressly teach the method of using the first amplifier for a voice call and the second amplifier for a data call. However, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to use one of the amplifier branch for a voice call and the other amplifier branch for a data call since each branch works on a different channel, same as a voice and data call, in order to be able to transmit voice and data calls simultaneously.

3. Claims 29, 34, 38, 39, 40, 45, 49, 50, 58, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolkstein in view of Steel et al. (U.S. 6,782,244).

4. With respect to claim 29, Wolkstein discloses a method for transmitting two different calls on different channels via a first and second output branch (Column 2, lines 31-37). Even though Wolkstein does not expressly teach the method of using the first output branch for a voice call and the second branch for a data call, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to use one of the output branches for a voice call and the other output branch for a data call since each branch works on a different channel, same as a voice and data call, in order to be able to transmit voice and data calls simultaneously. Wolkstein also discloses a method for combining the first and second output branches for transmission over a wireless interface. Wolkstein's method is described for satellite communications, but Wolkstein does teach the use of this method for other uses (Column 1, lines 16-18). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to employ this method in a mobile wireless communication device since both deal with wireless communication in order to have a simultaneous multi-channel mobile wireless communication device. Wolkstein further discloses that the output branches have the capability of switching in response to power requirements (Abstract). Wolkstein does not expressly teach the method of transmitting a voice call over both branches. However, Steel et al. discloses a transmitting method for a mobile

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wireless communication device that teaches the use of enabling a second branch to transmit the same call and then combining the signal when the required transmit power for the call exceeds a threshold (Column 2, lines 40-52). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to employ Steel et al.'s method of using two output branches to transmit the same call in Wolkstein's method in order to adjust for power requirements of the system.

With respect to claim 34, Wolkstein teaches using power data of each channel as a measure to switch output branches to achieve a particular output power level thus increasing transmit power of the voice call in response to the power control data (Abstract).

With respect to claim 38, Wolkstein discloses a first and second power amplifier, element numbers 38-1 and 38-2, in the first and second output branches in figure 1a (Column 2, lines 31-37). Wolkstein further discloses combining the amplified signals (Column 2, lines 46-51).

With respect to claim 39, Wolkstein discloses each channel, voice and data call channels, having a different frequency range, carrier frequency (Abstract).

With respect to claims 40, 45, and 58, Wolkstein discloses a wireless communication device comprising a first and second output branch for transmitting two different calls on different channels (Column 2, lines 31-37). Even though Wolkstein does not expressly teach the method of using the first output branch for a voice call and the second branch for a data call, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to use one of the output branches for a voice call

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and the other output branch for a data call since each branch works on a different channel, same as a voice and data call, in order to be able to transmit voice and data calls simultaneously. Wolkstein's wireless communication device is described for satellite communications, but Wolkstein does teach the capability of the device for other uses (Column 1, lines 16-18). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to employ this method in a mobile wireless communication device since both deal with wireless communication in order to have a simultaneous multi-channel mobile wireless communication device. Wolkstein further discloses a coupler/combiner circuit, element number 30, to combine the first and second output branches for transmission over the antenna (Column 2, lines 46-51). Wolkstein further discloses that the output branches have the capability of switching in response to power requirements using power control unit, element number 26 (Abstract and Column 2, lines 52-56). Wolkstein does not expressly teach the method of transmitting a voice call over both branches. However, Steel et al. discloses a transmitting method for a mobile wireless communication device that teaches the use of power control unit, element number 180, in figure 2 enabling a second branch to transmit the same call and then combining the signal when the required transmit power for the call exceeds a threshold (Column 2, lines 40-52). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to employ Steel et al.'s method of using two output branches to transmit the same call in Wolkstein's method in order to adjust for power requirements of the system.

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With respect to claim 49, Wolkstein discloses a first and second power amplifier, element numbers 38-1 and 38-2, in the first and second output branches in figure 1a (Column 2, lines 31-37). Wolkstein further discloses combining the amplified signals (Column 2, lines 46-51).

With respect to claim 50 and 63, Wolkstein discloses each channel, voice and data call channels, having a different frequency range, carrier frequency in figure 1b (Column 1, lines 34-36). Wolkstein's device receives these signals at different frequencies; however, it would be obvious to one of ordinary skill in the art to use two baseband to radio frequency processors to convert two signals, voice and data, to two different carrier frequencies like the signals coming into Wolkstein's device are in order to modulate two separate signals and transmit them at two different frequencies.

### ***Allowable Subject Matter***

5. Claims 1-17, 23-28, 52-57, and 64-68 are allowed. The specific technique of using a phase-shifted version of the voice call and dropping the data call was not found nor fairly suggested in the prior art.

6. Claims 19-22, 30-33, 35-37, 41-44, 46-48, 51, and 59-62 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Asada (U.S. 6,778,842) discloses a portable telephone with voice and data simultaneous transmitting capabilities. Rao et al. (U.S. 5,805,636) discloses a method and apparatus for simultaneous voice and data transmission. Heidmann et al. (U.S. 6,799,020) discloses a parallel amplifier structure that also controls the phase of the inputted signal (U.S. 6,799,020). Kayano et al. (U.S. 6,625,427) discloses a multi-channel radio transmission apparatus. Stengel et al. (U.S. 5,541,554) and Sevic et al. (U.S. 5,872,481) both disclose a parallel amplifier system for different power gains.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adeel Haroon whose telephone number is (571) 272-7405. The examiner can normally be reached on Monday thru Friday, 8:30 a.m. - 5:00 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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6/9/05

  
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